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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,394	09/13/2000	Yasuhiro Komori	862.C2001	8092

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EXAMINER

NOLAN, DANIEL A

ART UNIT	PAPER NUMBER
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2654

DATE MAILED: 01/30/2004

16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/661,394

Applicant(s)

KOMORI ET AL.

Examiner

Daniel A. Nolan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 8, 10, 12, 14, 18, 19, 21, 23, 25, 26, 28, 30, 32, 34, 35, 37 and 39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 8, 10, 12, 14, 18, 19, 21, 23, 25, 26, 28, 30, 32, 34, 35, 37 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

2. The response filed 11 August 2003 was filed to the following effect that the claims were changed as indicated and examined on the merits.
 - The title was changed as indicated and the objection is withdrawn as satisfied.
 - The Specification was changed as indicated and the objection is withdrawn.
 - Claims 5, 7, 9, 11, 13, 15-17, 20, 22, 24, 27, 29, 31, 33, 36 and 38 were cancelled and the objection and rejections are withdrawn as moot.
 - Claims 1-4, 6, 8, 10, 12, 14, 18, 19, 21, 23, 25, 26, 28, 30, 32, 34, 35 and 37 have been changed as indicated.
 - Claim 39 was added and the claims were examined on the merits.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:
 - In claim 4, the feature of *notifying speech recognition of model* is not found in the specification.

- The Examiner is proceeding with the understanding that communication between terminal and speech recognition will suffice to direct processing.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 23 recites the limitation "*data conversion condition quantization table*" in the 8th line. There is insufficient antecedent basis for this limitation in the claim.

The Examiner is proceeding with the understanding that the *quantization table* of the previous line is intended.

Claim Rejections - 35 USC § 102

Suzuki et al

7. Claims 1, 2, 4, 6, 8, 21, 25, 26, 30, 34, 35 and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki et al (U.S. Patent 5,749,068).

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8. Regarding claims 1, 6, 21, 25, 26, 30, 34 and 35; the invention for speech recognition apparatus and method in noisy circumstances of Suzuki et al reads on every feature of the claims for a *speech input terminal* (column 1 line 37 & column 8 line 3) in a *speech communication system* (column 7 lines 35-36) as follows:

- Suzuki et al reads on the feature of the *speech input terminal for transmitting inputted speech data to a speech recognition apparatus* (column 7 line 50) *through a network* (column 7 lines 54-55), and the *speech recognition apparatus executing speech recognition processing for the speech data transmitted from the speech input terminal*,
- Suzuki et al (column 8 line 3) reads on the feature of *speech input means* and the feature of *creating a model* (i.e. the "noise" model of column 8 line 6) *based on information captured by the speech input means, the model being for environment adaptation for speech recognition; and*
- Suzuki et al (column 8 lines 14-19) reads on the feature of *communication transmitting the model to the speech recognition apparatus* (described in column 8 lines 41-45).
- With particular regard to the feature of claims 6, 26 and 35, Suzuki et al discloses that the model is *received* (as depicted, for example, by 14→17 in figure 13) for *executing speech recognition* (18 in figure 13).

9. Regarding claim 2, the claim is set forth with the same limits as claim 1. Suzuki et al reads on the feature that *the model indicates at least one of a characteristic of the*

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speech input, a noise characteristic (with the SNR of column 8 line 23), and a speaker characteristic.

10. Regarding claim 4 as understood by the Examiner, the claim is set forth with the same limits as claim 1. Suzuki et al reads on the feature of *storing the model* (column 3 line 57), *determining whether there has been a change in the model in each transmitting of the speech data* (column 3 lines 28-31); *and notifying the speech recognition apparatus of the corresponding model, when there has been no change in the model.*

11. Regarding claim 8, the claim is set forth with the same limits as claim 6. Suzuki et al reads on the feature of *creating an environment adaptation speech recognition model* (i.e. the "noise" model of column 8 line 6) *on the basis of the received model.*

12. Regarding claim 39, the claim is set forth with the same limits as claim 1. Suzuki et al reads on the feature that *the model is an average* (10 in figure 24) *or variance of the captured information.*

Claim Rejections - 35 USC § 103

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Suzuki et al & Satoh et al

14. Claims 3, 10, 23, 28, 32 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al in view of Satoh et al (U.S. Patent 5,293,588 A).

15. Regarding claims 3 and 10; the claims are set forth with the same limits as claims 1 and 8, respectively. Suzuki et al does not mention a *quantization table*. The speech detection apparatus (that is) not affected by input energy or background noise level of Satoh et al reads on the feature of *quantizing the speech data* (column 2 line 67 to column 3 line 9) *using a quantization table before transmitting the speech data to the speech recognition apparatus*, (column 9 lines 55-58) *the quantization table being received from the speech recognition apparatus* (column 9 lines 3-8).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Satoh et al to the device/method of Suzuki et al so as to allow a mobile speech processing apparatus to be used a variety of environments without adjustment.

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16. Regarding claim 23 as understood by the Examiner and claims 28, 32 and 37; the claims are set forth with the same limits as claims 21, 26, 30 and 35, respectively.

Suzuki et al reads on the feature/step of *creating an environment adaptation speech recognition model* (i.e. the "noise" model of column 8 line 6) *on the basis of the received model* but Suzuki et al does not mention a *quantization table*.

Satoh et al reads on the feature of *quantizing the speech data* (column 2 line 67 to column 3 line 9) *using a quantization table before transmitting the speech data to the speech recognition apparatus*, (column 9 lines 55-58) *the quantization table being received from the speech recognition apparatus* (column 9 lines 3-8). It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Satoh et al to the device/method of Suzuki et al so as to allow a mobile speech processing apparatus to be used a variety of environments without adjustment.

Suzuki et al, Satoh et al & Nomura et al

17. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al in view of Satoh et al and further in view of Nomura et al (U.S. Patent 4,907,274 A).

18. Regarding claim 12, the claim is set forth with the same limits as claim 10.

Neither Suzuki et al nor Satoh et al mention *distribution*. The intelligent work station of Nomura et al reads on the feature where *the quantization table is created based on the*

distribution of the environment adaptation speech recognition model (column 14 lines 1-6).

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Nomura et al to the device/method of Suzuki et al & Satoh et al to use a standard pattern for composite similarity calculation based on proper value and vector.

Suzuki et al & Tchorzewski et al

19. Claims 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al in view of Tchorzewski et al (U.S. Patent 4,922,538 A).

20. Regarding claims 14 and 18, the claims are set forth with the same limits as claims 6 and 8, respectively. Suzuki et al does not specify *multiple terminals*. Tchorzewski et al reads on the features where the *speech communication system comprises a plurality of speech input terminals* (2 in figure 1) and *storing the model in correspondence with each of the speech input terminals* (column 2 lines 1-13), where the multi-user speech recognition system has data base storing templates for transfer to recognizers assigned to specific terminals.

It would have been obvious to a person of ordinary skill in the art of speech signal processing at the time of the invention to apply the method/teachings of Tchorzewski et al to the device/method of Suzuki et al so as to avoid setting up the terminal to compensate for every variation in operation.

Suzuki et al, Satoh et al & Tchorzewski et al

21. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al in view of Satoh et al and further in view of Tchorzewski et al.

22. Regarding claim 19, the claim is set forth with the same limits as claim 10. The features of the claim are the same as those of claims 14 and 18, and the claim is rejected for the same reasons.

Conclusion

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Matsumoto (U.S. Patent 5,987,416 A) electronic community system using speech recognition for use by the visually impaired.
- Frimmel, Jr. (U.S. Patent RE34536 E) call management system, protocol converter and port controller.
- Yamakita (U.S. Patent 5,956,681 A) apparatus for generating text data on the basis of speech data input from terminal.
- Tchorzewski et al (U.S. Patent 4,922,538 A) multi-user speech recognition system.

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

25. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Daniel A. Nolan at telephone (703) 305-1368 whose normal business hours are Mon, Tue, Thu & Fri, from 7 AM to 5 PM.

If attempts to contact the examiner by telephone are unsuccessful, supervisor Richemond Dorvil can be reached at (703)305-9645.

The fax phone number for Technology Center 2600 is (703)872-9314. Label informal and draft communications as "DRAFT" or "PROPOSED", & designate formal communications as "EXPEDITED PROCEDURE". Formal response to this action may be faxed according to the above instructions,

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or mailed to: Mail Stop AF (or CPA, etc. – see Official Gazette, 04 November 2003)
P.O. Box 1450
Alexandria, VA 22313-1450

or hand-deliver to: Crystal Park 2,
2121 Crystal Drive, Arlington, VA,
Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 Customer Service Office at telephone number (703) 306-0377.

Daniel A. Nolan
Examiner
Art Unit 2654

DAN/d
January 23, 2004



RICHEMOND DORVIL
SUPERVISORY PATENT EXAMINER